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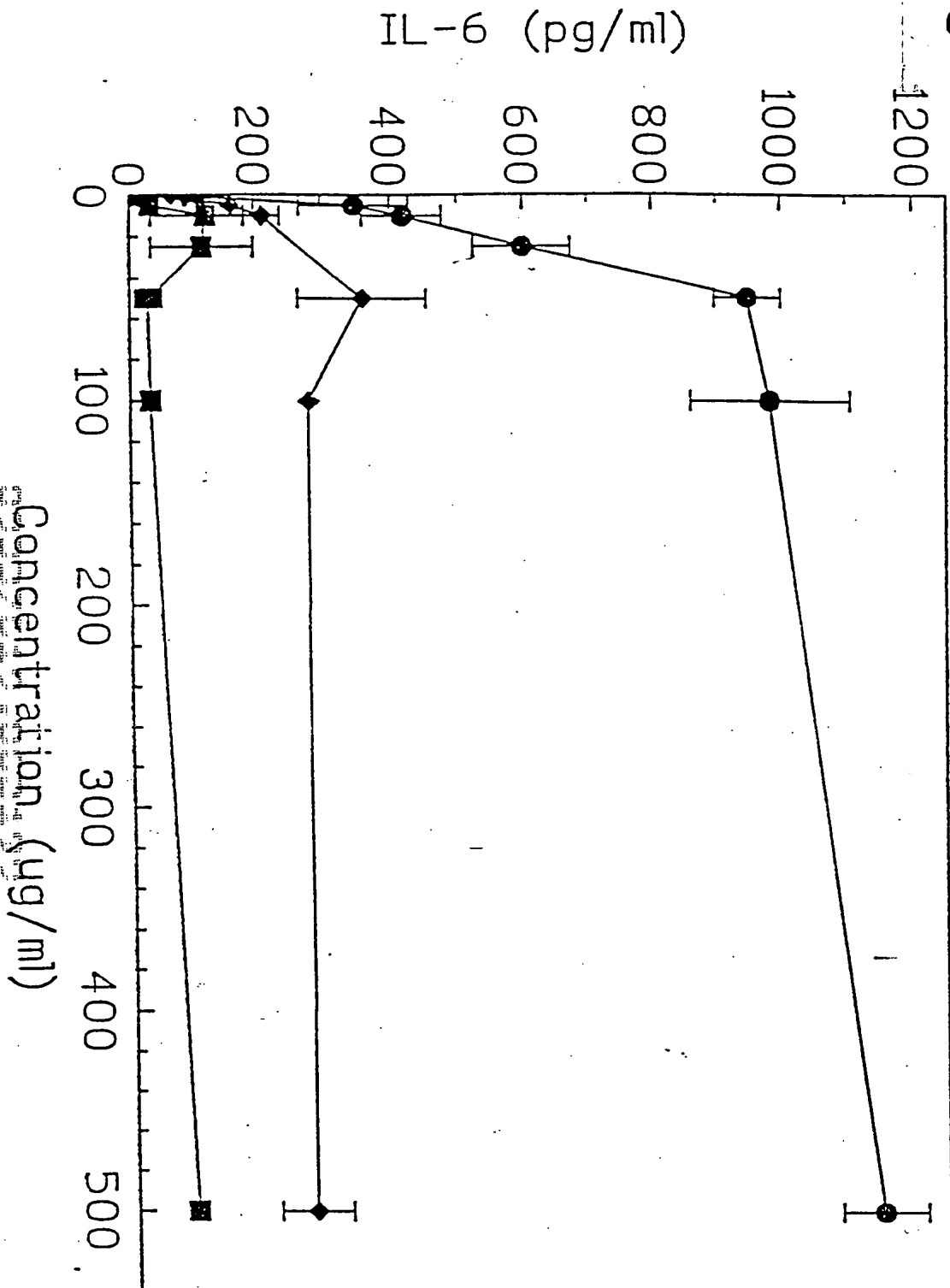


FIGURE 1A

FIGURE 1B

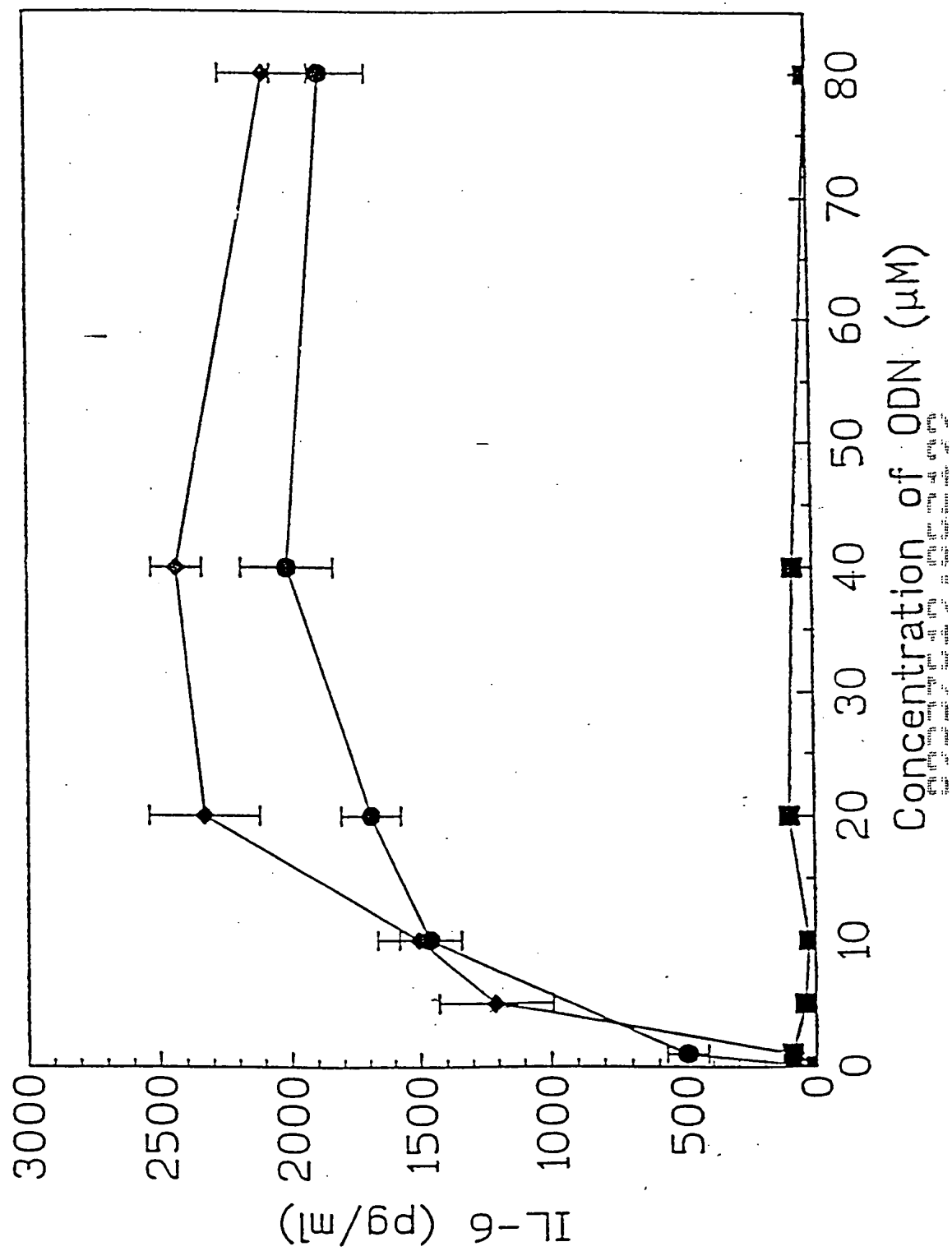


FIGURE 1C

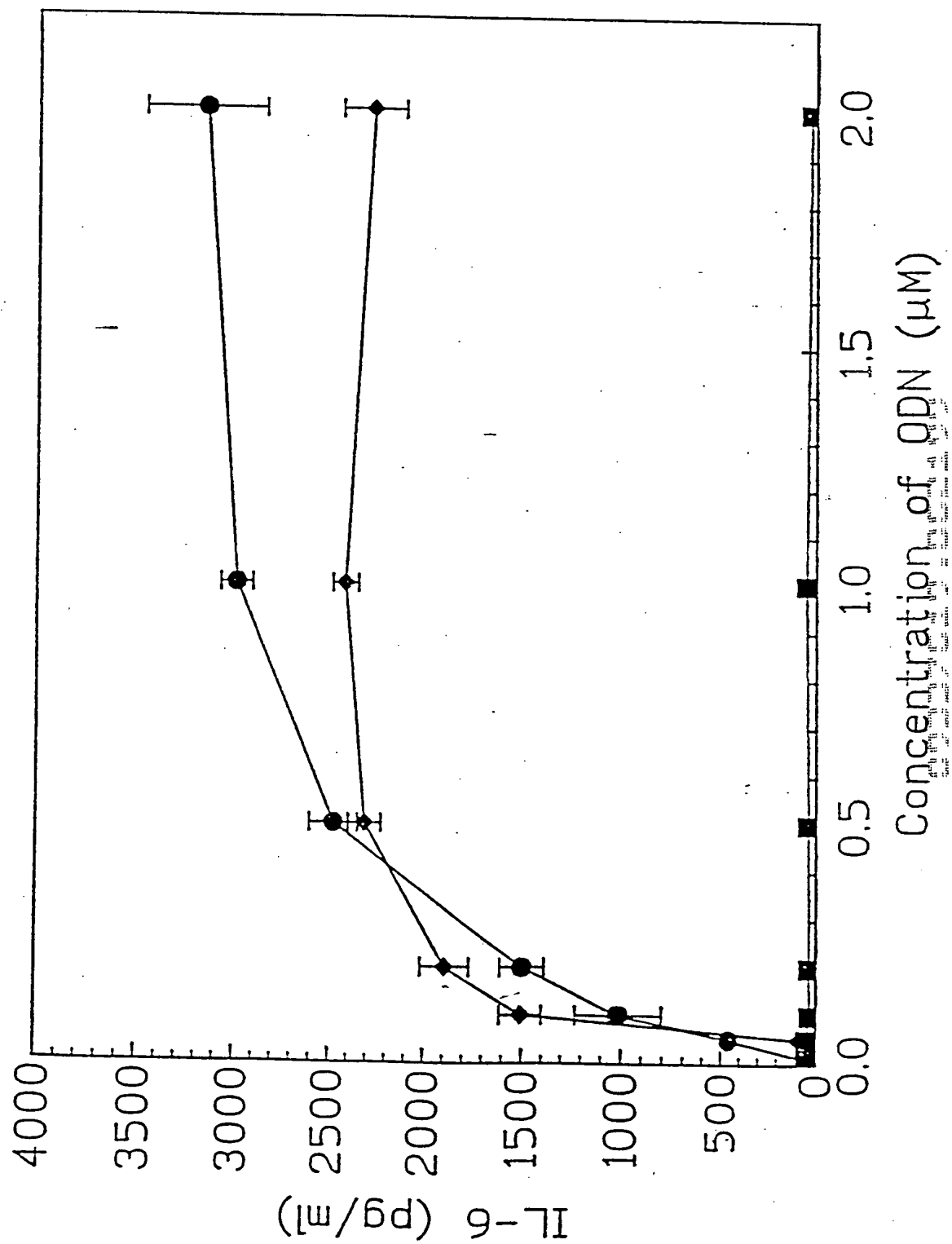
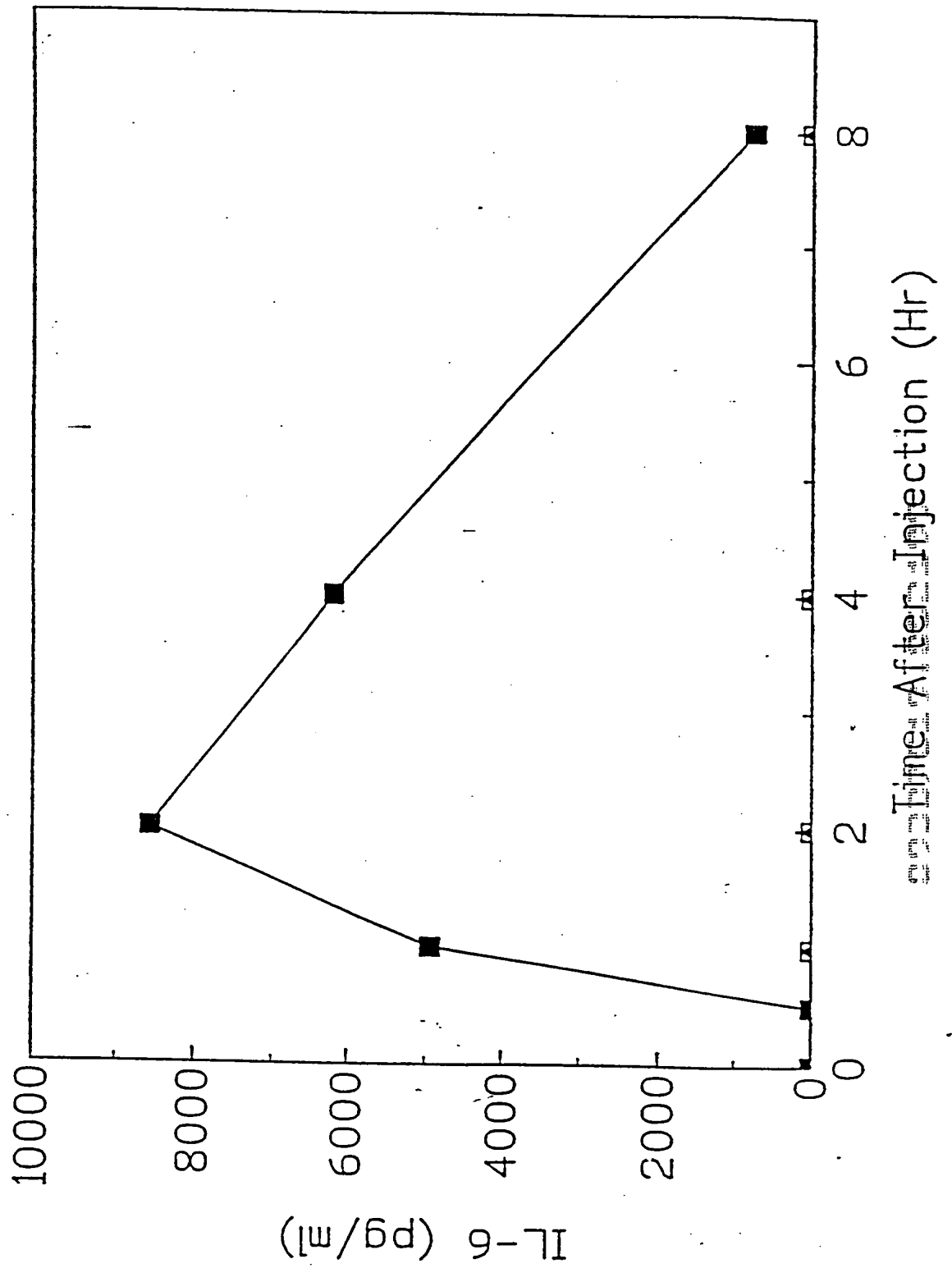


FIGURE 2



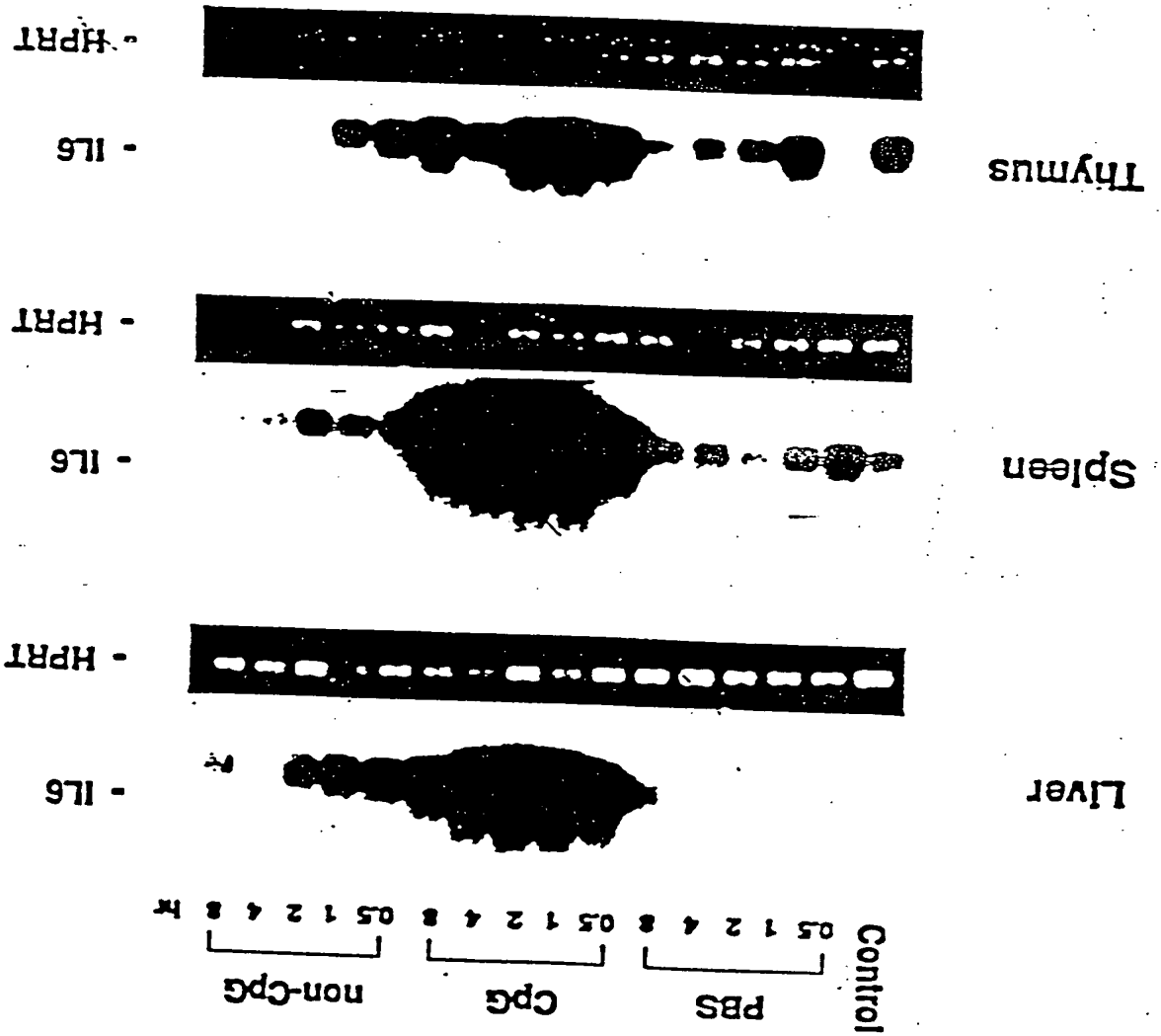


FIGURE 3

HPRT and IL6 gene expression in thymus, spleen, and liver tissues of mice treated with CPg or non-CPg for 0.5, 1, 2, 4, and 8 hours. The HPRT gene is used as a control for equal loading, while IL6 is the target of interest. The spleen shows a significant increase in IL6 expression over time in the CPg group, while the thymus and liver show less pronounced effects.

FIGURE 4A

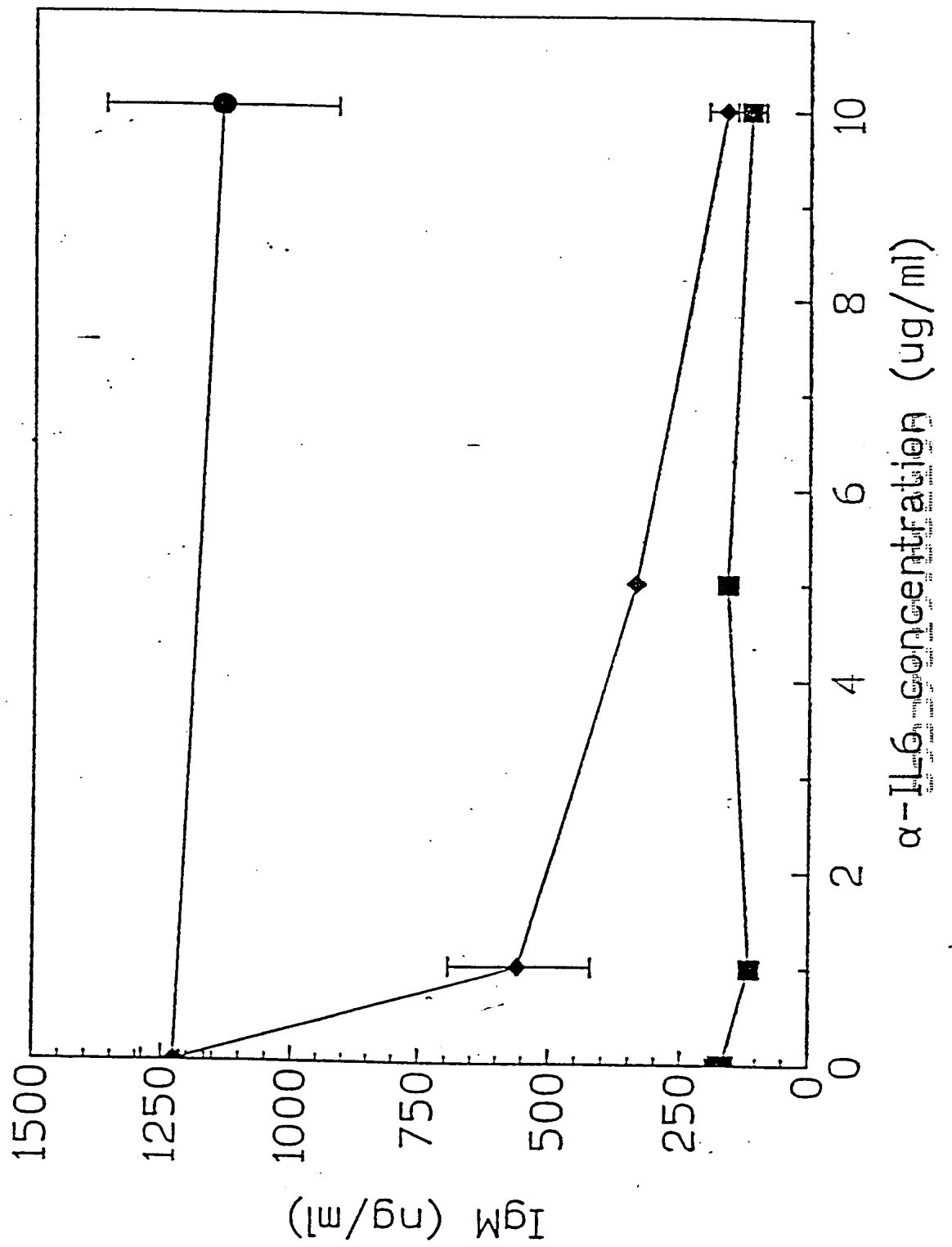
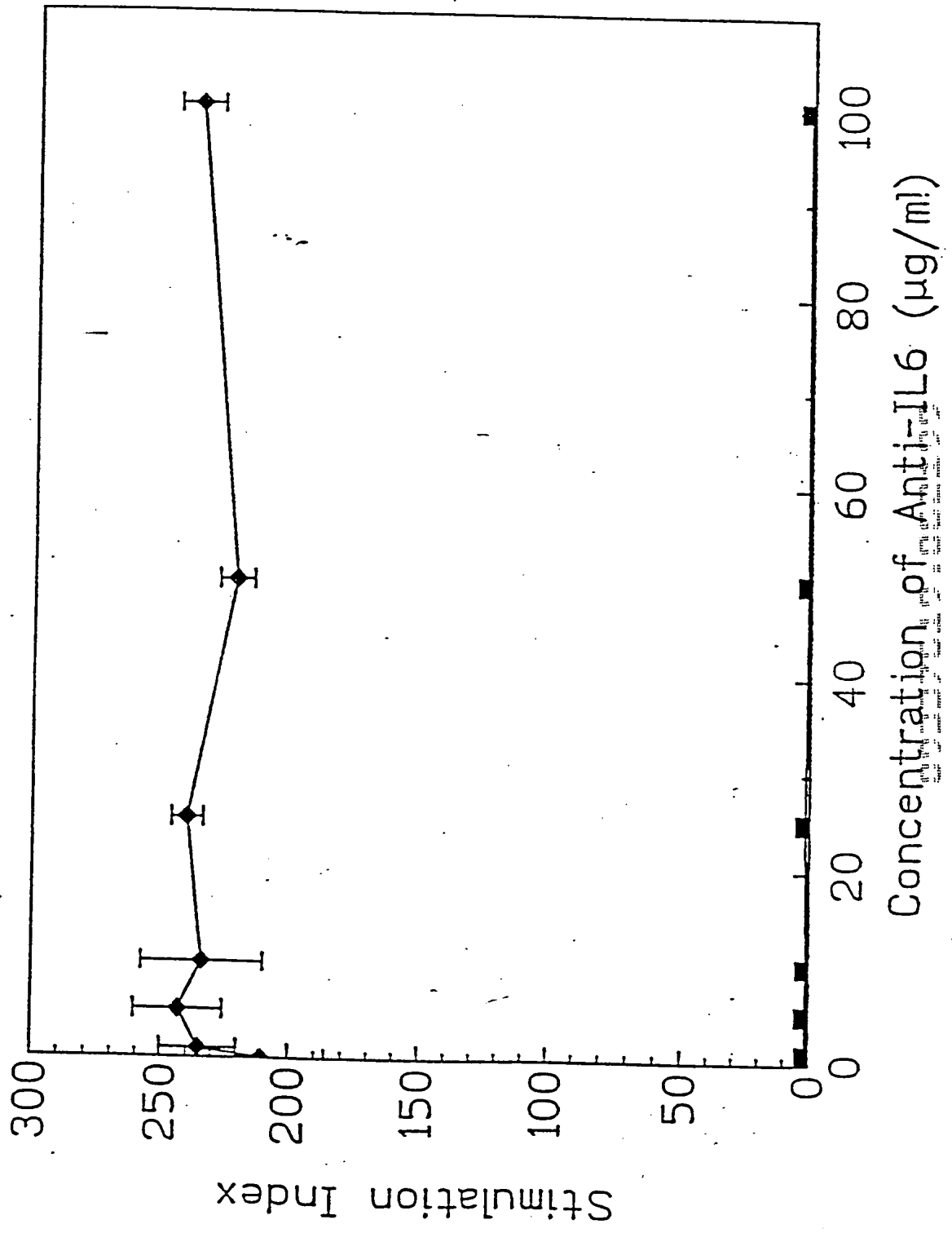


FIGURE 4B



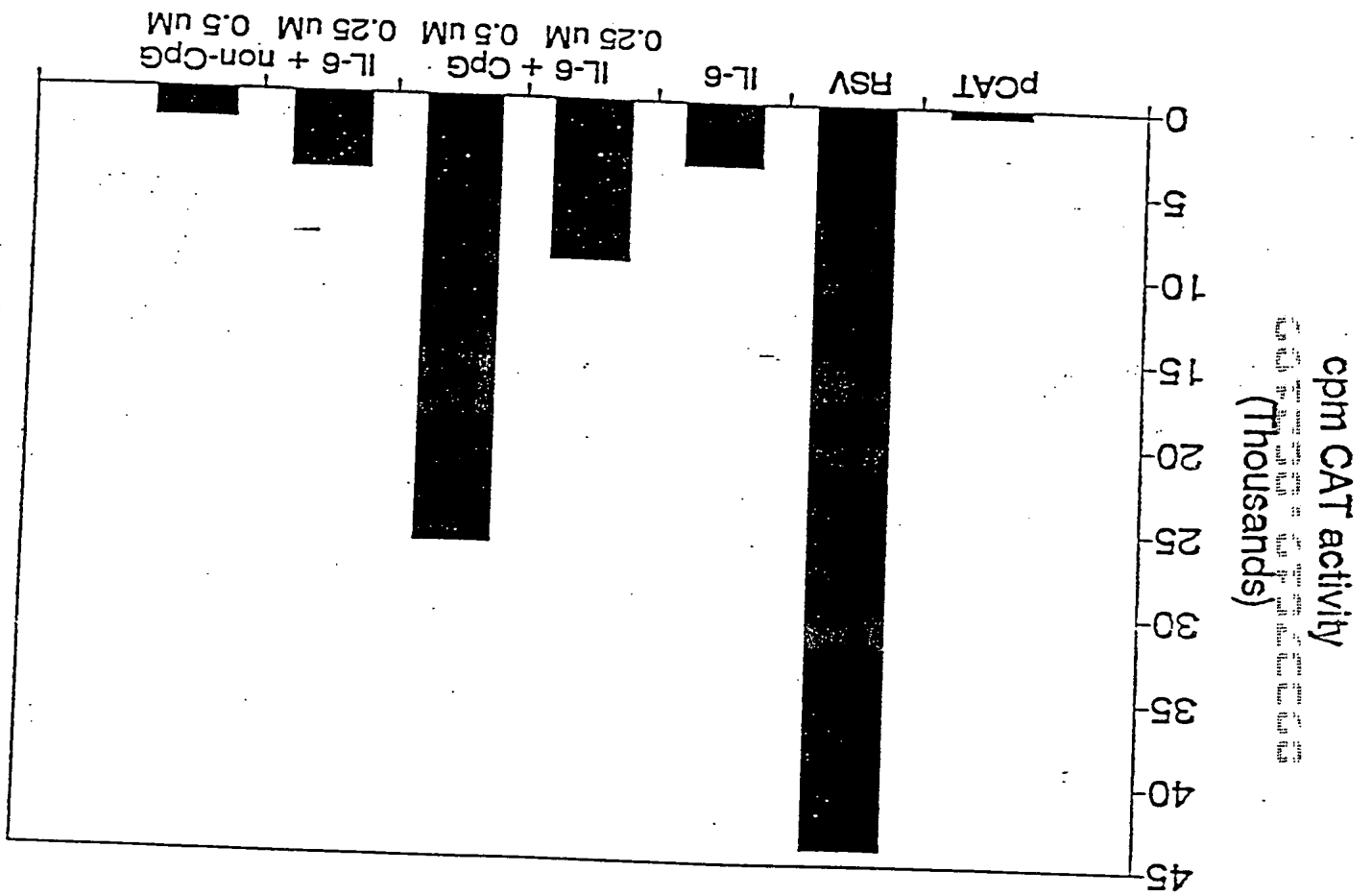


FIGURE 5

FIGURE 6

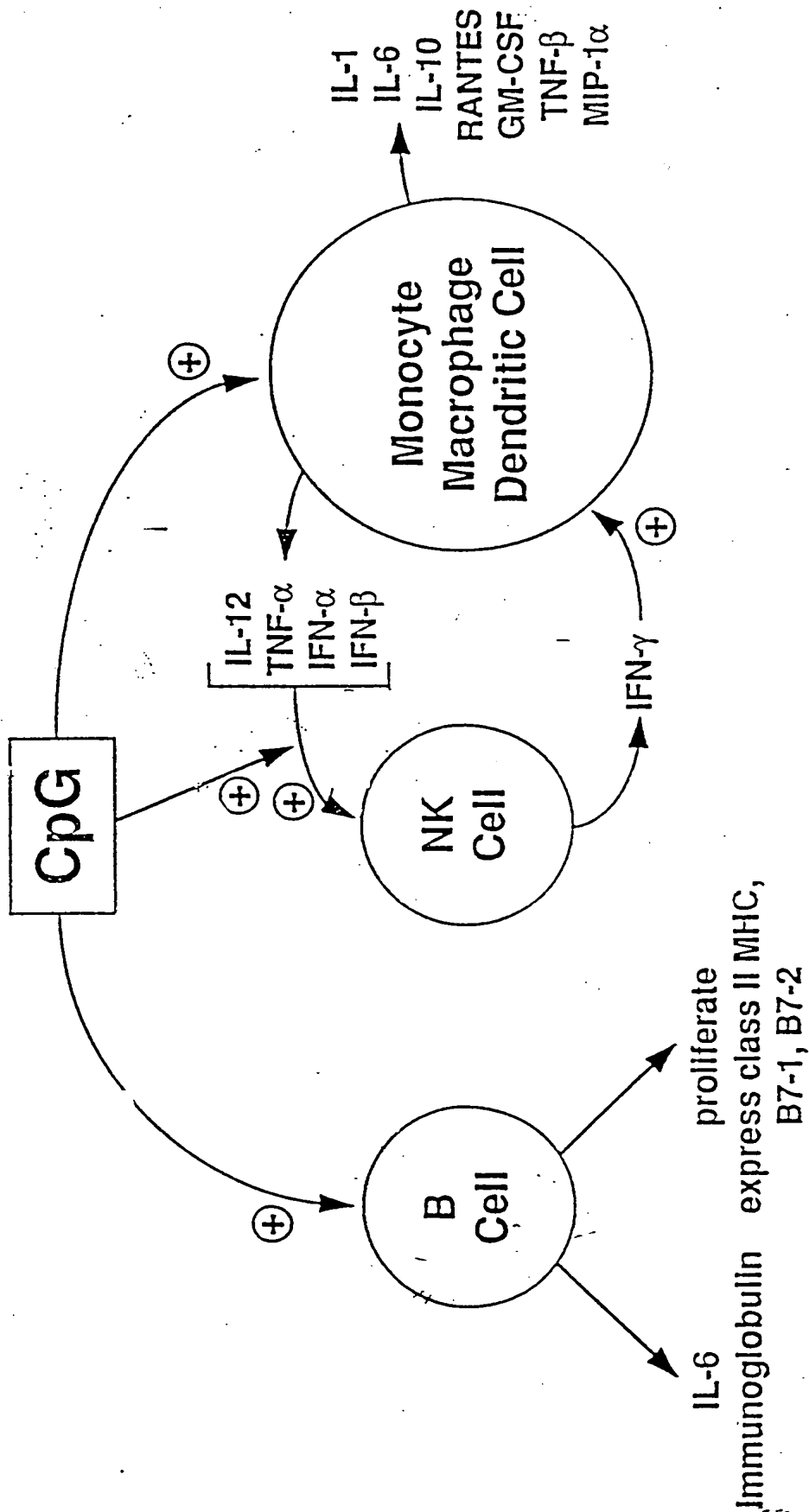
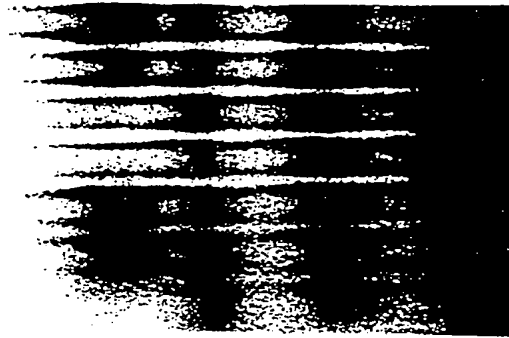


Figure 6 shows the effect of CpG on the immune system. CpG induces the production of IL-6, IL-12, TNF- α , IFN- α , IFN- β , and IFN- γ by monocytes, macrophages, and dendritic cells. These cytokines then act on B cells and NK cells to induce proliferation, expression of class II MHC, and expression of B7-1 and B7-2.

FIGURE 7

Timing of NF κ B Activation in Monocytes treated with E. coli DNA

Treatment:	0	EC	CT	LPS
		DNA	DNA	
min:	0	15	30	15
		30	15	30



1000 800 600 400 200

FIGURE 8A

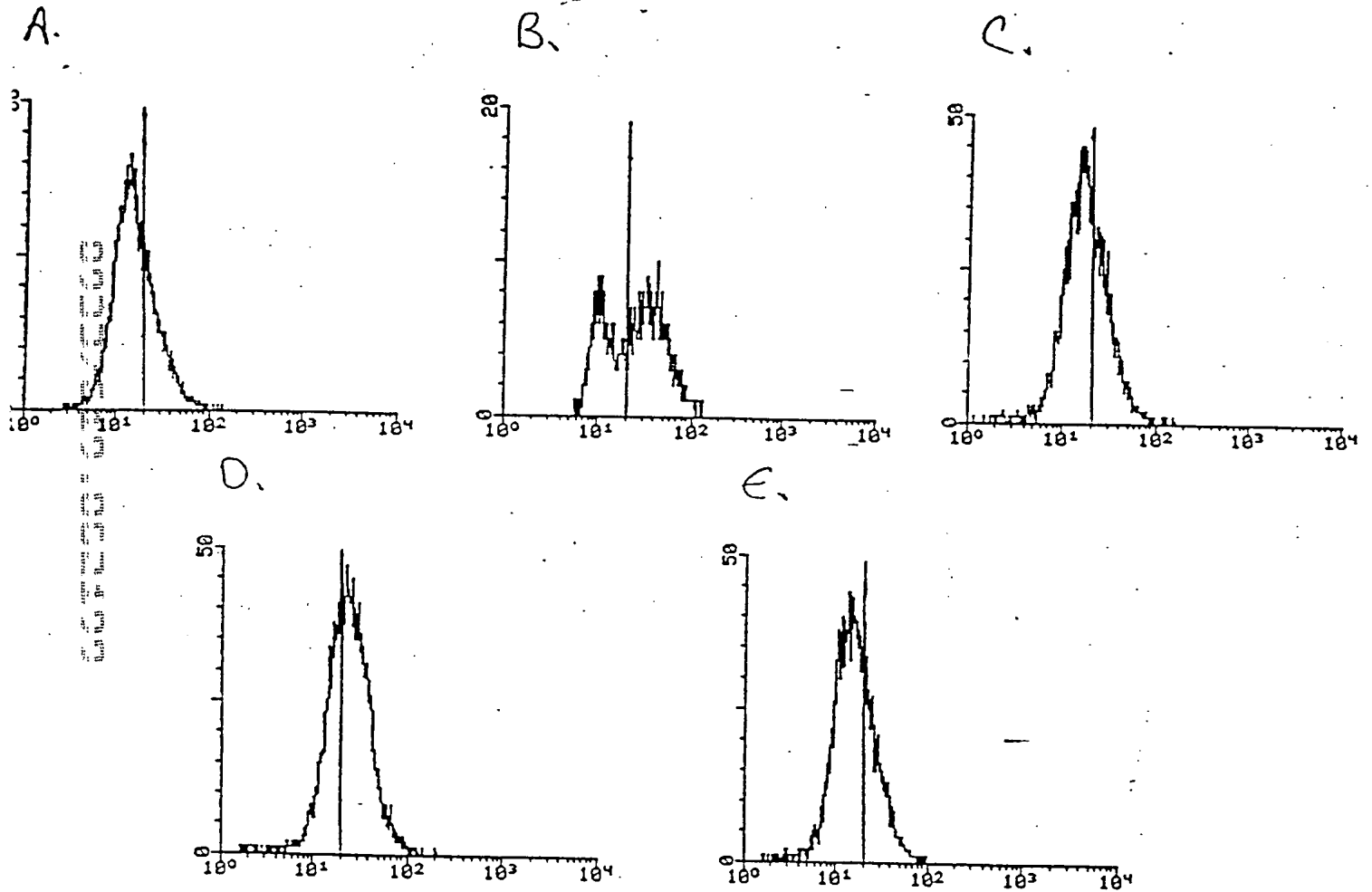
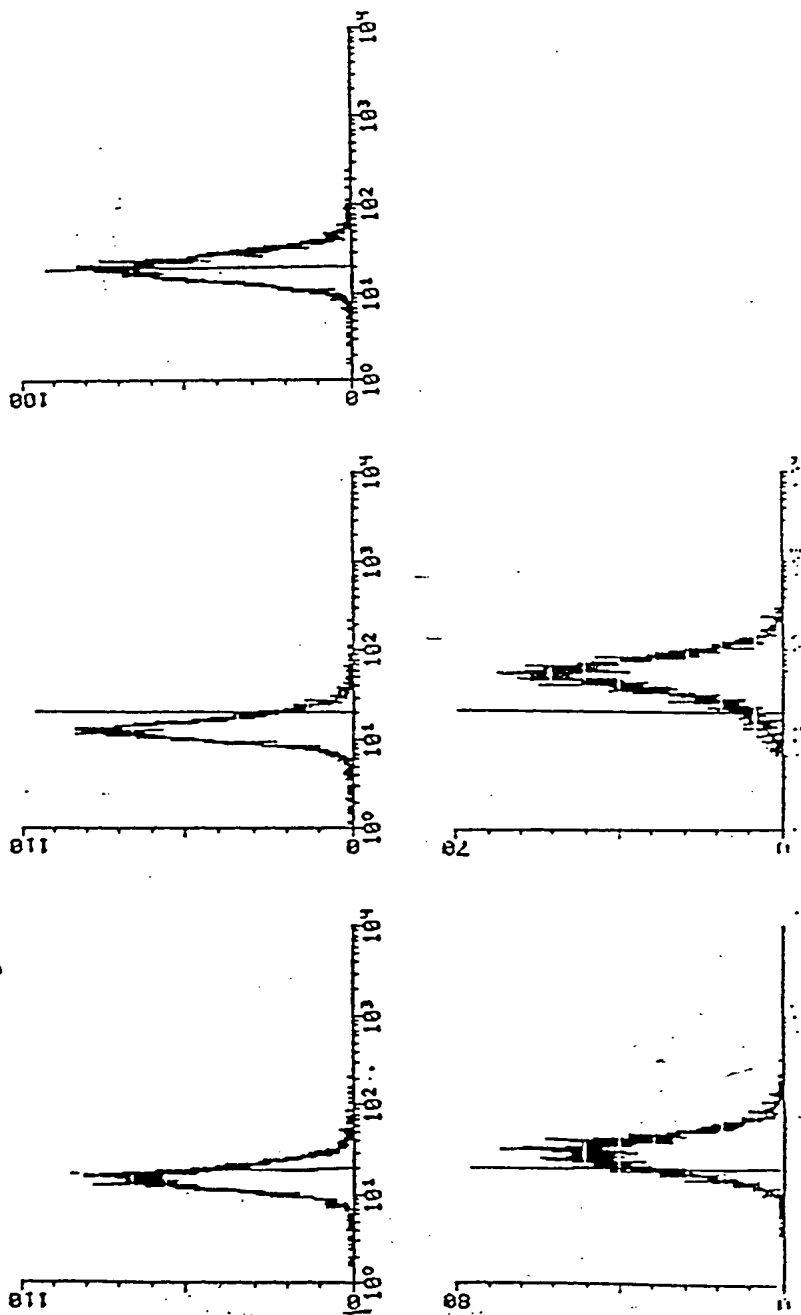


FIGURE 8B

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FIGURE 9

Effect of CpG and Airway Exposure on Lung Lavage Cell Count

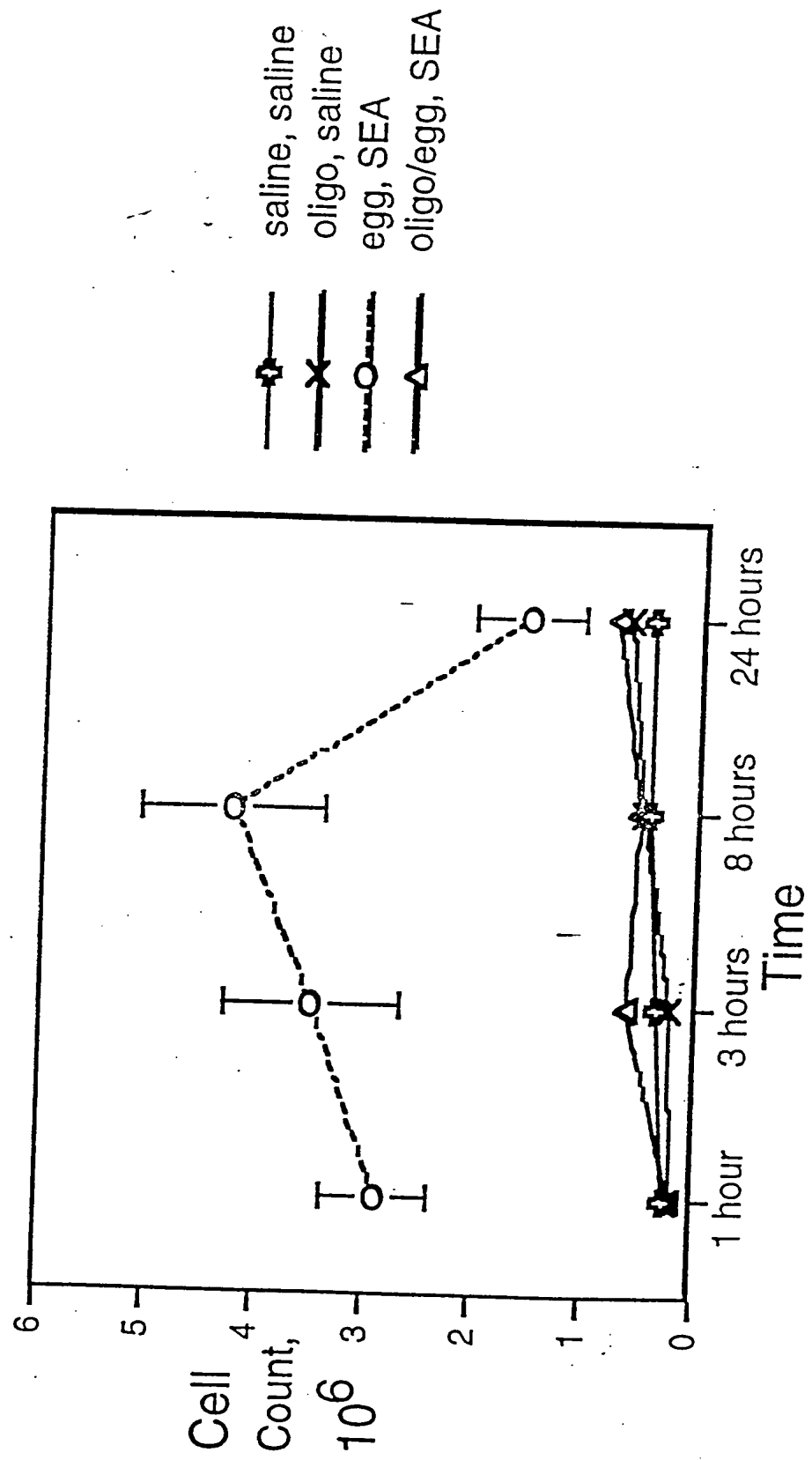


FIGURE 10

Effect of CpG and Airway Exposure on Lung Lavage Eosinophil Count

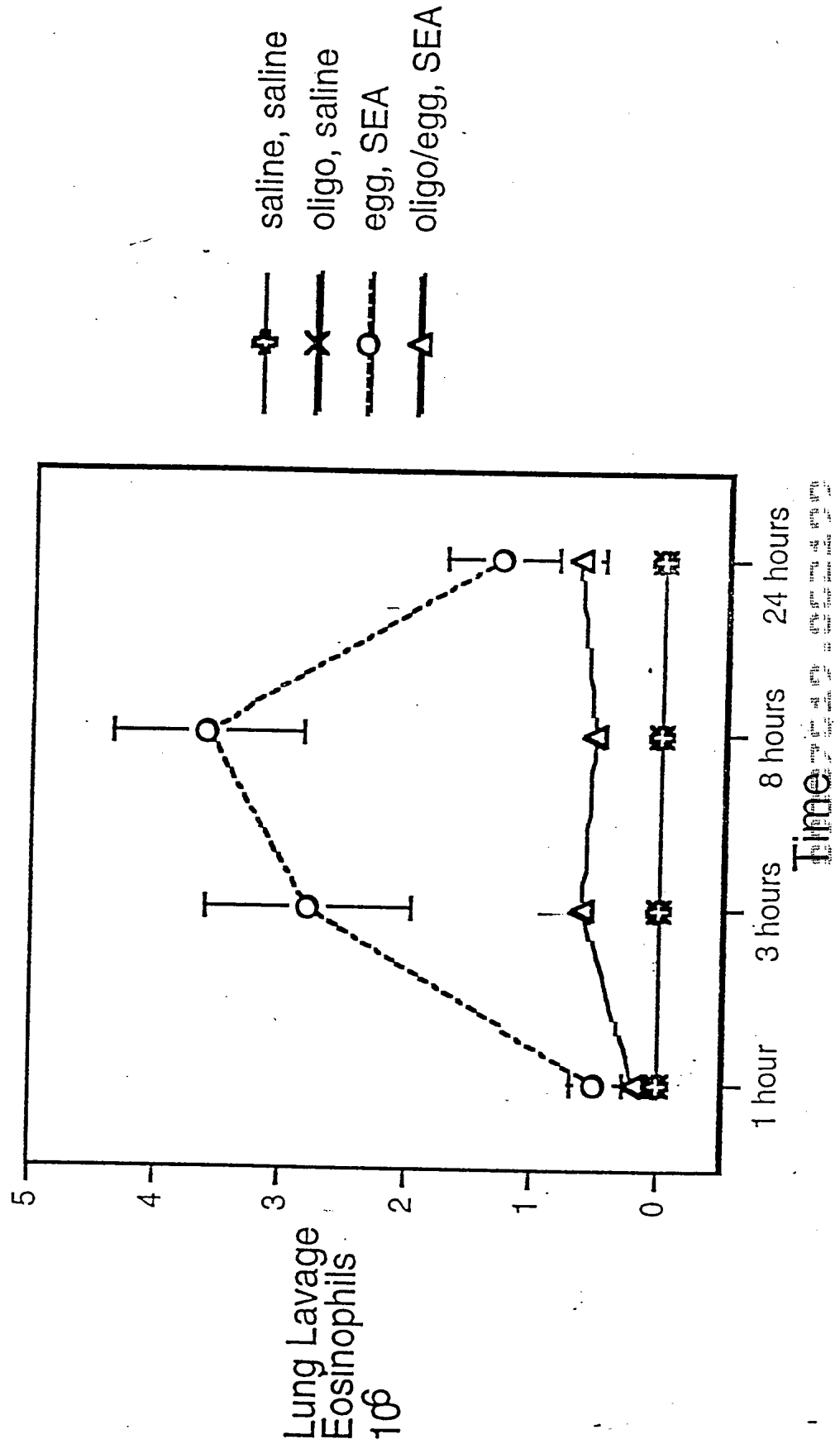


FIGURE 11

Effect of CpG and Airway Exposure on Lung Lavage Differential

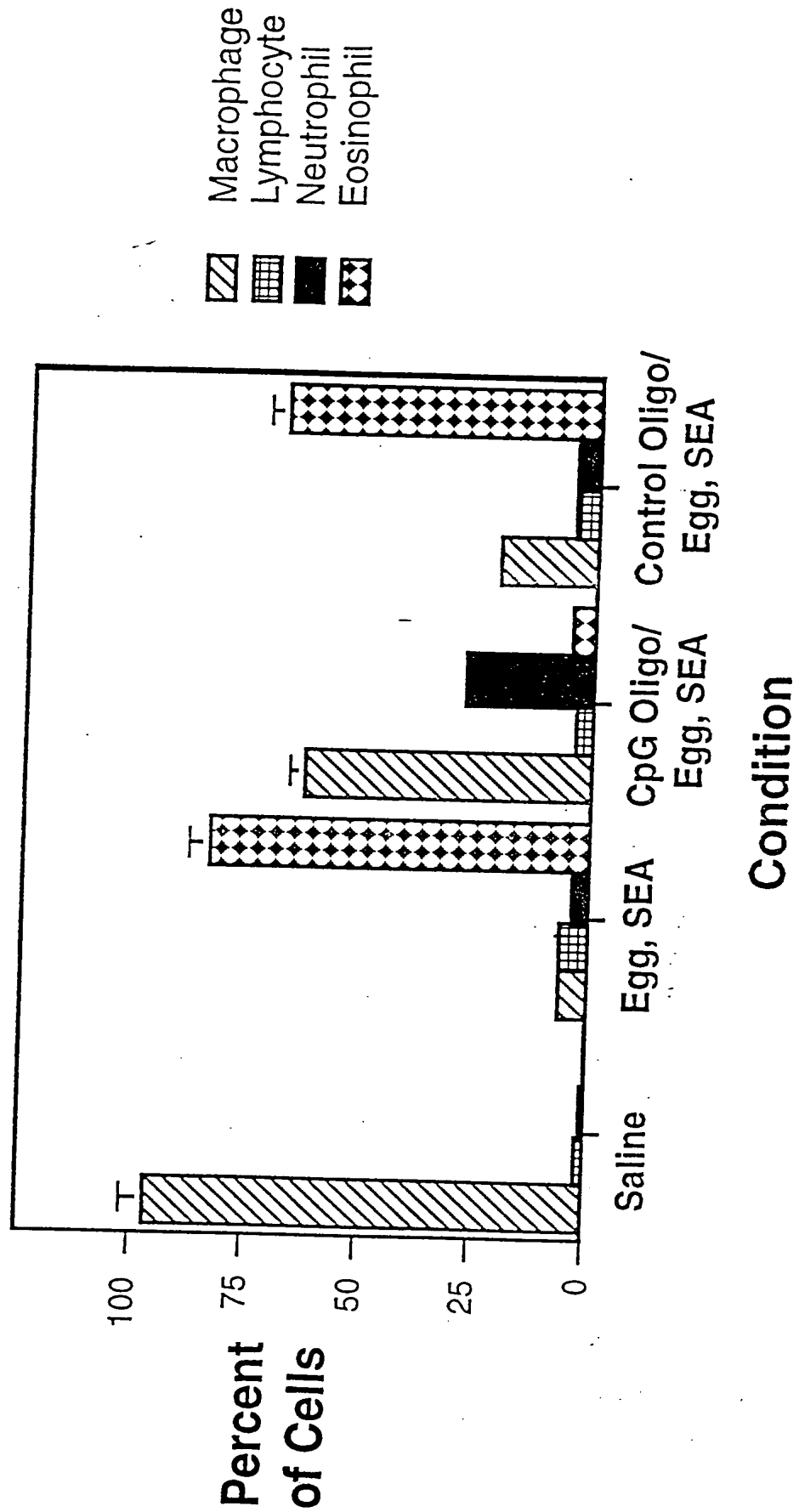
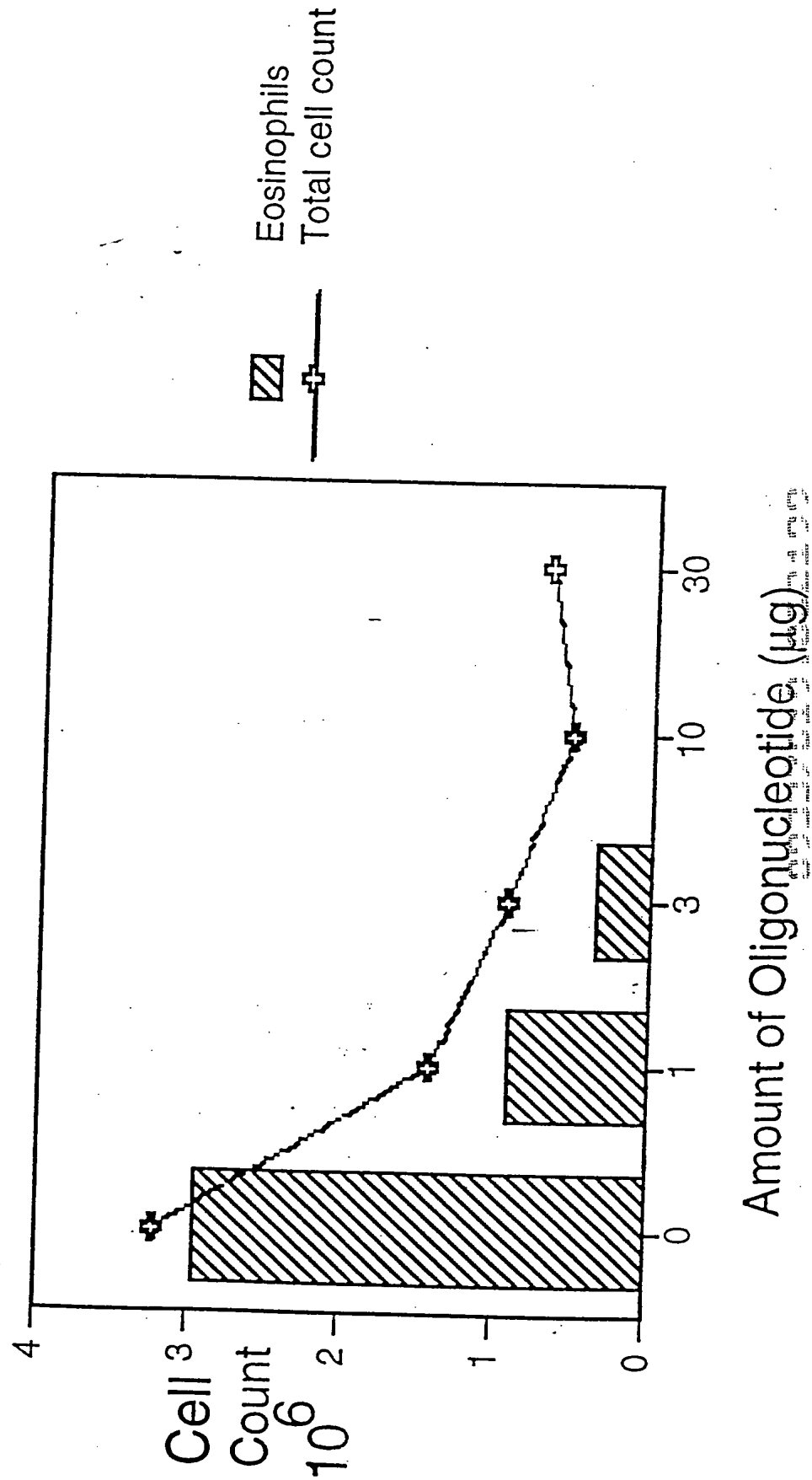


FIGURE 12

Effect of Oligonucleotide Dose on Total and Eosinophil Cell Counts



Effect of CpG and Airway Exposure on Lung Lavage IL-4

FIGURE 13

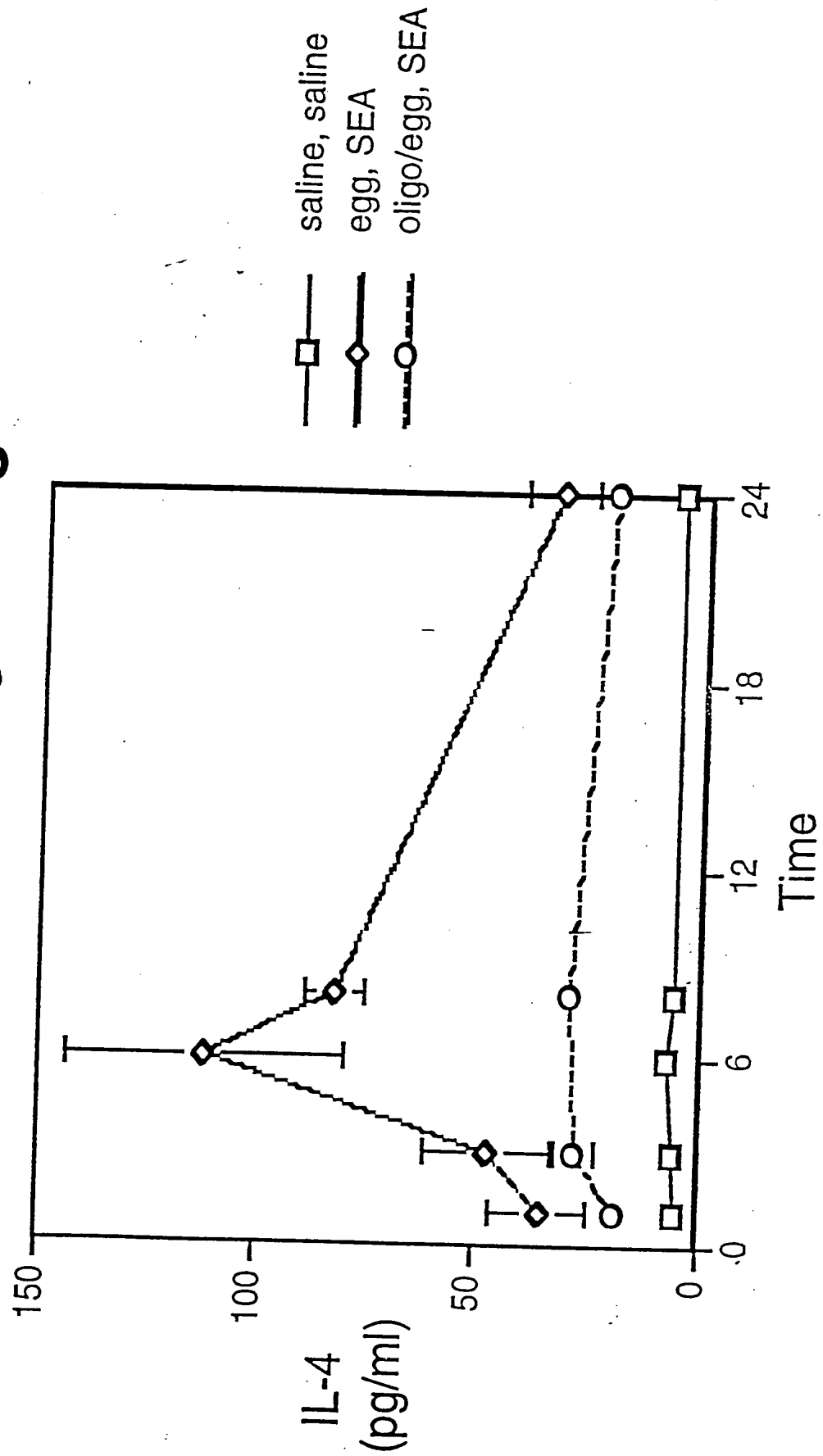


FIGURE 14

Effect of CpG and Airway Exposure on Lung Lavage IL-12

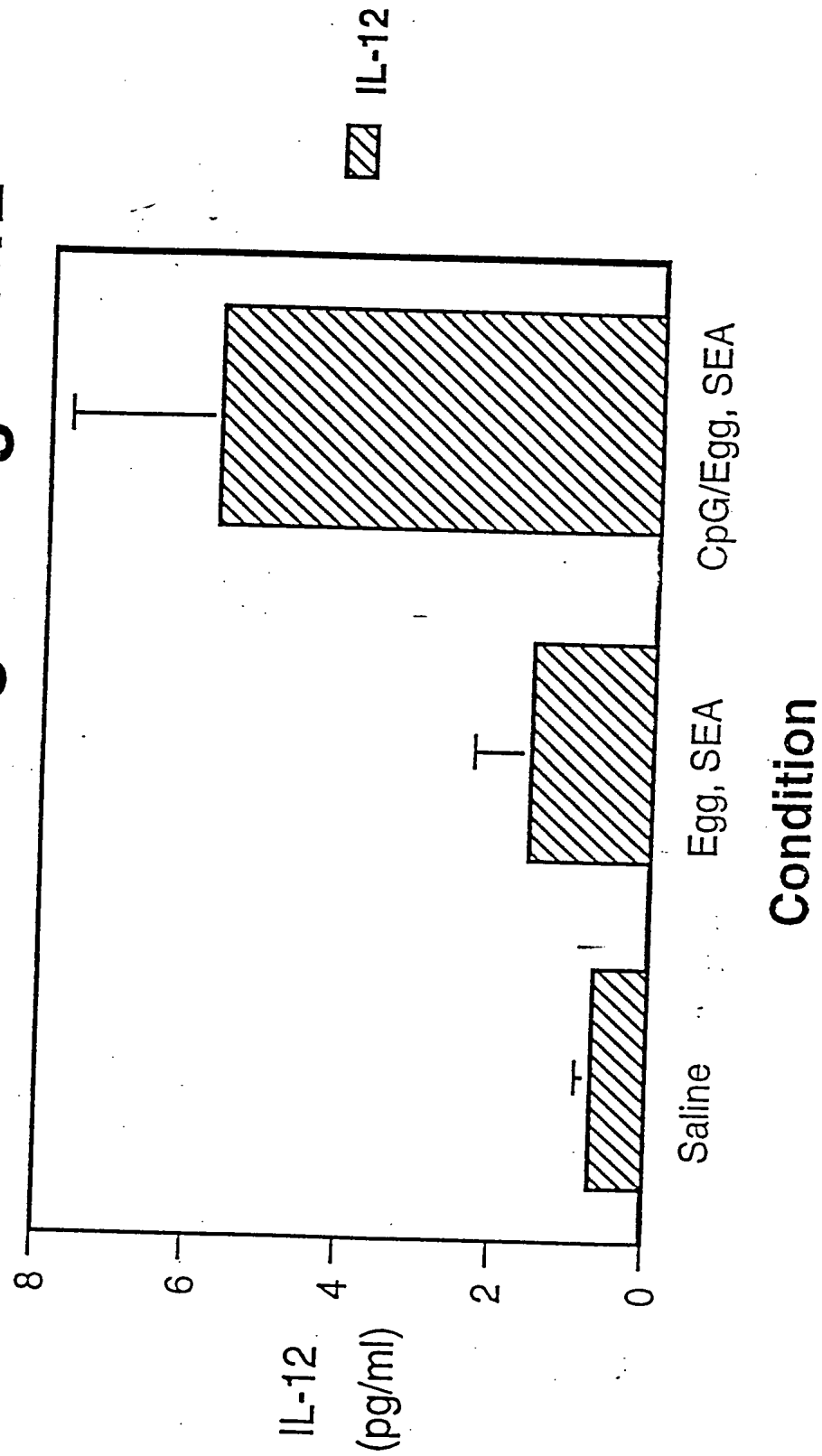


FIGURE 15

Effect of CpG and Airway Exposure on Lung Lavage IFN- γ

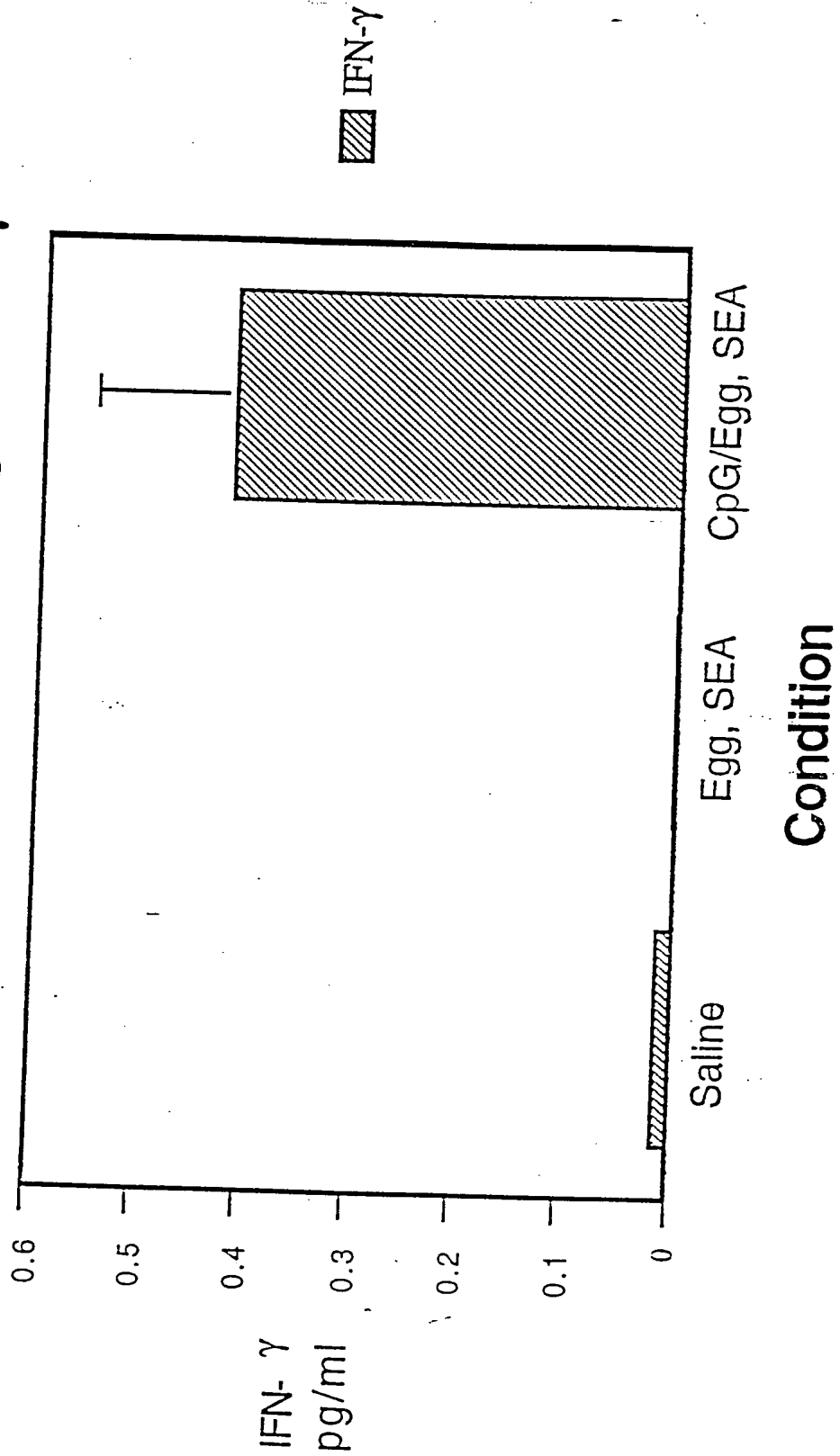


FIGURE 15. Effect of CpG and Airway Exposure on Lung Lavage IFN- γ . The graph shows that the combination of CpG and airway exposure (CpG/Egg, SEA) results in a significantly higher level of IFN- γ compared to Saline and Egg, SEA conditions.

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